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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,783	03/25/2004	Long-Hui Lin	LKSP0026USA	2782
27765	7590	02/06/2006	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION			SUN, XIUQIN	
P.O. BOX 506			ART UNIT	
MERRIFIELD, VA 22116			PAPER NUMBER	
			2863	

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,783	LIN, LONG-HUI	
	Examiner	Art Unit	
	Xiuqin Sun	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Upon further consideration the finality of the office action of 10/27/2005 is hereby withdrawn and replaced by the following office action. Any inconvenience to the Applicant(s) is regretted.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Pinto et al. (U.S. Pub. No. 20050139767).

With respect to claim 8:

Pinto et al. teach a method for monitoring a machine comprising: selecting a product wafer running through the machine (section 0078, lines 3-5); performing a non-destructive detection to the selected product wafer to inspect a plurality of defects (section 0078, lines 5-7 and lines 13-17); separating pre-layer defects from defects generated by the machine (section 0078, lines 7-10; sections 0205 and 0217); analyzing the defects generated by the machine for killer defects (sections 0205, 0207 and 0217); if killer defects are present among the defects generated by the machine,

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initiating an alarm on the machine (section 0078, lines 10-13; section 0205); and if killer defects are not present among the defects generated by the machine, processing a work of the machine (section 0078, lines 10-13).

With respect to claims 9 and 10:

The teaching of Pinto et al. further includes: said separating the pre-layer defects is performed according to a predetermined database, the database comprising a classifying rule of each defect type and defect information of each defect type (sections 0061 and 0109); wherein the defect information of each defect type comprises an influence degree over a yield of the machine of each defect type (section 0221).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pinto et al. (U.S. Pat. No. 20050139767) in view of Dor et al. (U.S. Pub. No. 20020072162).

Pinto et al. teach a method that includes the subject matter discussed above except that when killer defects are detected, the method further comprises following steps: performing a root cause analysis according to the defect type of the detected

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defects; and informing a responsible person of the semiconductor process to correct process parameters of the semiconductor process.

Dor et al. teach a method and apparatus for conducting case study of defects on semiconductor wafers (see Abstract), including: performing a root cause analysis according to the defect type of the detected defects (sections 0113, 0114, 0117 and 0126); and informing a responsible person of the semiconductor process to correct process parameters of the semiconductor process (sections 0113, 0114, 0117 and 0126).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Dor et al. in the invention of Pinto et al. in order to provide a better understanding of the wafer defects and correlate the cause of the defects with proper solutions (Dor et al., sections 0006 and 0007).

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinto et al. (U.S. Pat. No. 20050139767) in view of Peles et al. (U.S. Pub. No. 20050075841).

Pinto et al. teach a method that includes the subject matter discussed above.

Pinto et al. do not mention expressly: wherein the method utilizes inline automatic defect classification (ADC) tools to classify the defects; and wherein the ADC tools includes databases of defect types of each layer to classify the defects.

Peles et al. teach an ADC system and method, including: said method utilizes inline automatic defect classification (ADC) tools to classify the defects (sections 0063

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and 0071); and wherein the ADC tools includes databases of defect types of each layer to classify the defects (sections 0010, 0013, 0076 and 0081).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Peles et al. in the invention of Pinto et al. in order to provide a robust system for automatic defect classification and controlling (Peles et al., Abstract).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Response to Arguments

8. Applicant's arguments received 01/23/06 with respect to claims 8-13 have been considered but are moot in view of the new ground(s) of rejection.

Claims 8-13 are rejected as new prior art references (U.S. Pub. No. 20050139767 to Pinto et al. and U.S. Pub. No. 20050075841 to Peles et al.) have been found to teach the claimed invention. Detailed response is given in sections 2-7 as set forth above in this Office Action.

Applicant's arguments with respect to the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in last Office Action are persuasive. The rejection has been hereby withdrawn.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuqin Sun whose telephone number is (571)272-2280. The examiner can normally be reached on 6:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571)272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

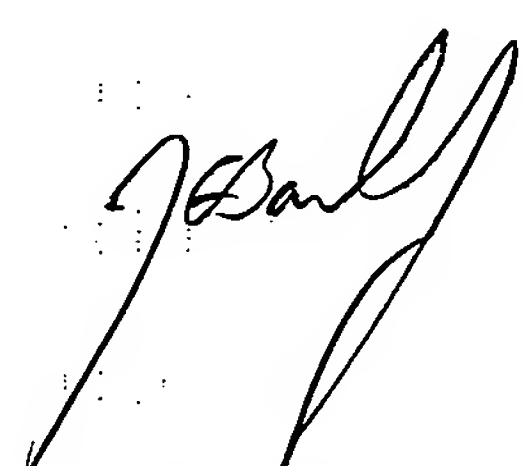
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

XS

February 2, 2006

Xiuqin Sun
Examiner
Art Unit 2863


John Barlow
Supervisory Patent Examiner
Technology Center 2800